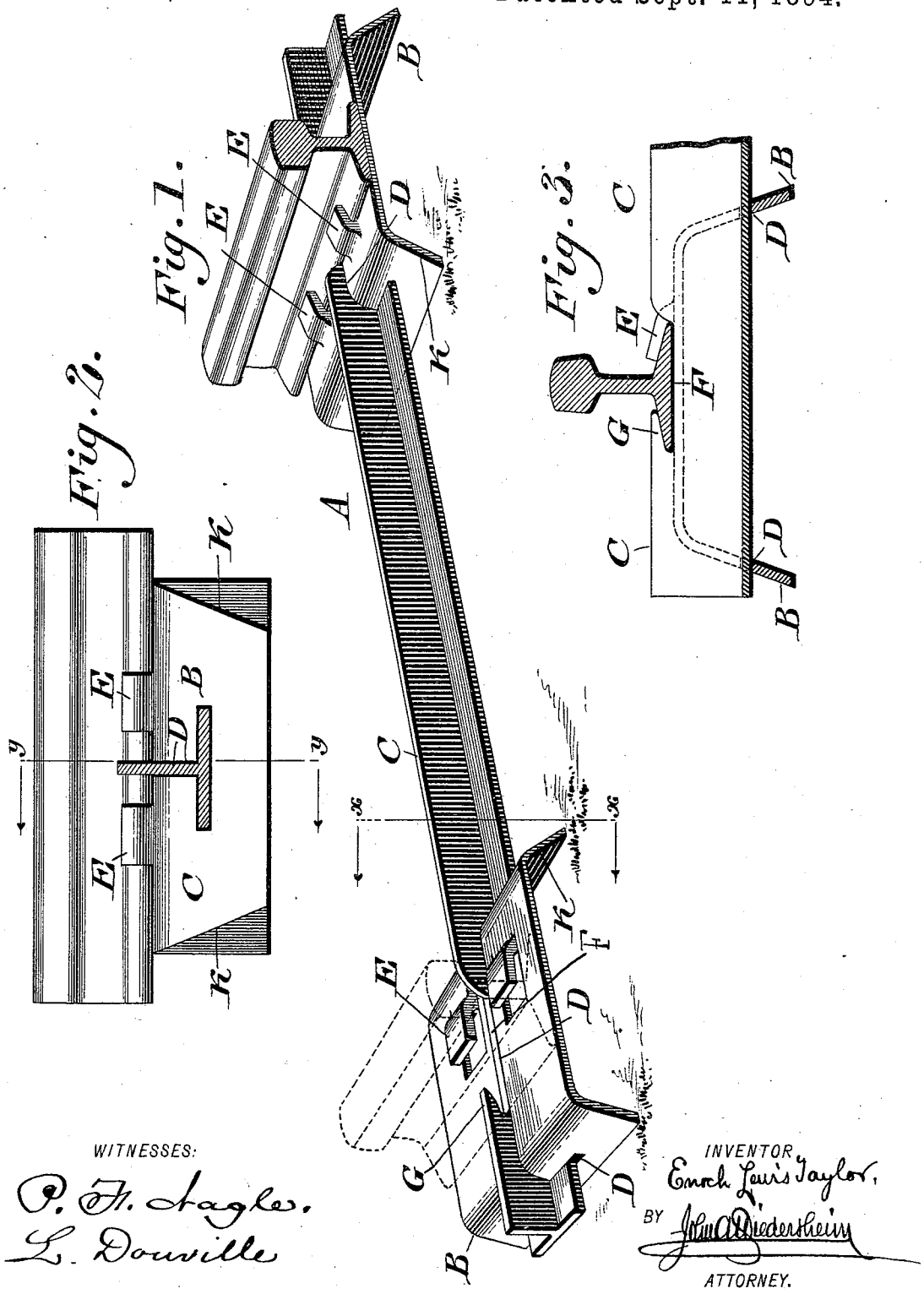
(No Model.) 2 Sheets—Sheet 1.

E. L. TAYLOR.

METALLIC RAILWAY TIE.

No. 525,927. Patented Sept. 11, 1894.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

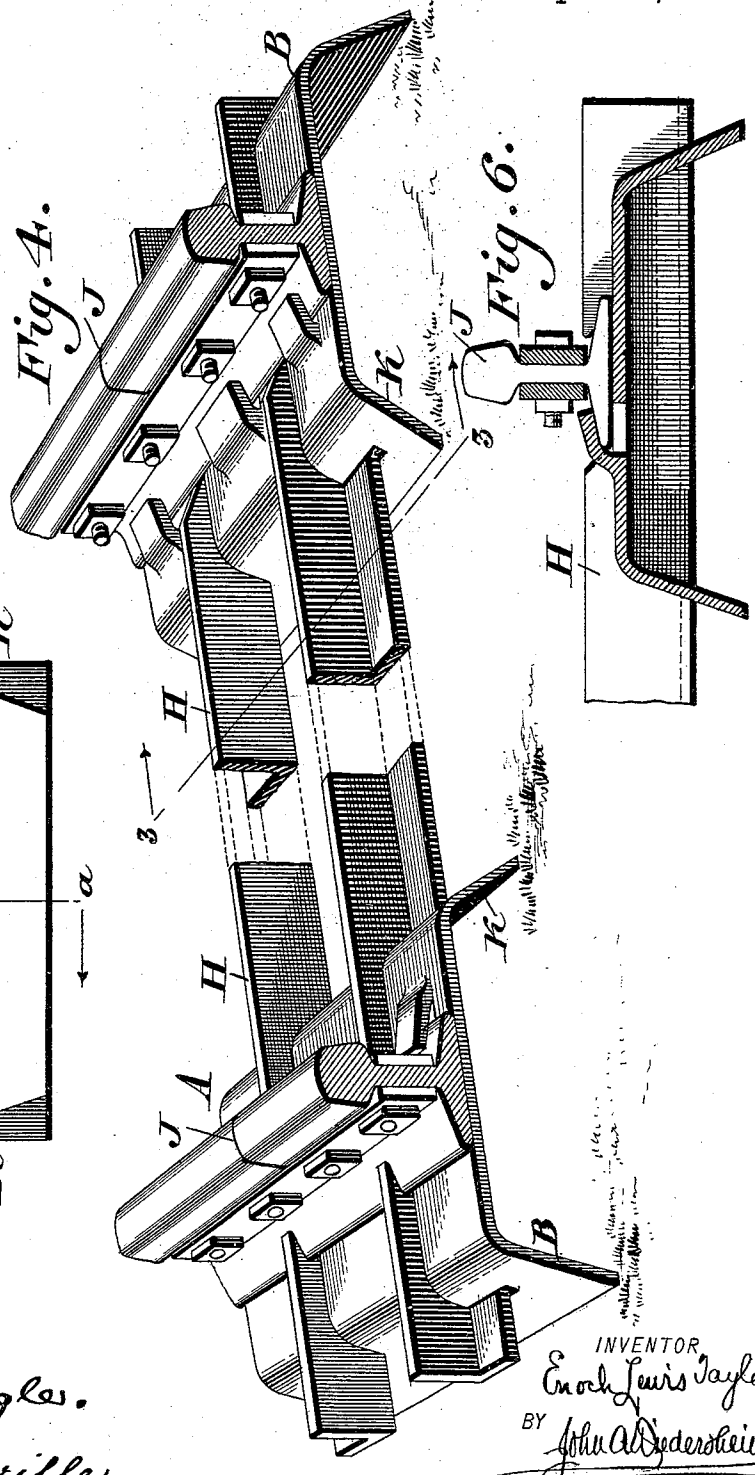

Fig. 5.

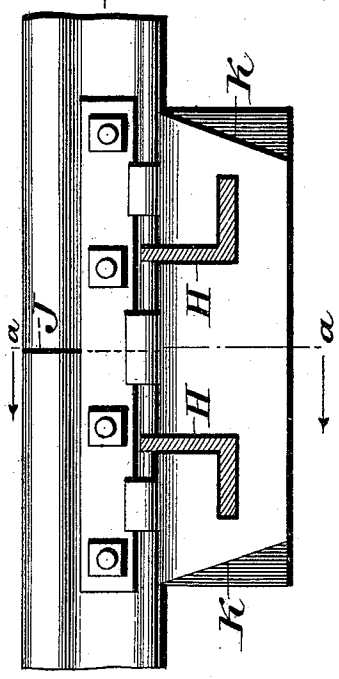

Fig. 6.

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ENOCH LEWIS TAYLOR, OF PHILADELPHIA, PENNSYLVANIA.

METALLIC RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 525,927, dated September 11, 1894.

Application filed August 26, 1893. Serial No. 484,108. (No model.)

To all whom it may concern:

Be it known that I, ENOCH LEWIS TAYLOR, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Metallic Railway-Ties, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a sleeper having an inverted T shaped slot therein, and provided with the cheek pieces extending upwardly and a tie of inverted T form having both of its limbs occupying said slot, the lower limb of said tie being locked in the lower limb of the slot, so that the tie is prevented from an upward movement in the event of wash-outs or other accident, when said tie is subjected to upward strain or pressure from below.

It also consists in so constructing the sides of the sleepers as to provide convenient means for tamping, as will be hereinafter set forth.

Figures 1 and 4 represent perspective views of railway ties, embodying my invention. Fig. 2 represents a vertical section on line *x*, *x*, Fig. 1. Fig. 3 represents a vertical section on line *y*, *y*, Fig. 2. Fig. 5 represents a vertical section on line *z*, *z*, Fig. 4. Fig. 6 represents a vertical section on line *a*, *a*, Fig. 5.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings: A designates a metallic tie and support for a railroad rail, the same consisting of inverted channel plates or sleepers B, on which the rails are placed, and the stretchers or connecting ties C which extend transversely from opposite end pieces, said stretchers being formed of inverted T-irons or bars which pass through similarly-shaped slots D in the vertical limbs or portions of the ties B. The upper faces of the sleepers B which form the supports or beds for the rails, are provided with cheek pieces E, which are bent upwardly from the same, and the portions of the vertical limbs of the stretchers which are beneath the rails are cut away or recessed as at F, the bottom wall of the recess being flush with the tops of the sleepers B, and serving to have the contiguous part of the base of the rail superimposed thereon. The outer walls of the recesses F of the stretchers form cheek pieces G, which are opposite to the cheek pieces E, said cheek pieces E and G embracing the bases of the rails. It will be seen that when the stretchers and ties are separated outwardly or laterally, the rails may be seated on the plates B, and their flanges inserted under the cheek pieces E. The stretchers are then drawn back, whereby the cheek pieces G engage with the opposite sides of the flanges of the rails, it being seen that the rails are supported on both the plates B and the stretchers C, and that said plates are braced and stiffened by said stretchers, whereby strong structures are provided, and the rails are firmly sustained and fastened, and prevented from spreading, as the cheek pieces G are opposed to each other and resist such spreading or lateral strain, due to the outward strain of the rails against said cheek pieces G, when the rails are occupied.

In Figs. 4, 5, and 6, I show two stretchers H, each of angle irons or bars passed through the sleepers B on opposite sides of the joints J, H, of the rails, thus increasing the strength of the sleepers B, and sustaining the ends of adjacent rails on said sleepers. The sides of the inner limbs of the sleepers are cut away as at K, so as to taper said sides, and thus provide convenient means for tamping, it being noticed that the limbs of the sleepers flare downwardly so as to provide wide bases, and enlarge the spaces for ballasting. It will also be seen that the sleepers and stretchers are made of wrought metal, and that the ties are elastic in their nature, avoiding deadness and rigidity in the support of the rails. Furthermore, the sleepers and stretchers may expand and contract without loosening the rails, as the latter will move with such expansion and contraction, thus preventing rattling or loosening of the rails, it being also noticed that keys, wedges, pins or other fastenings are dispensed with for connecting the stretchers and the ties, and vice-versa.

By having the stretcher or tie proper of angle or ⊥ shape, and the lower limb or limbs thereof supported on the wall of the similarly shaped slots in the sleepers, the same is more firmly secured in place, and greater resistance to horizontal pressure thereon is afforded.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a metallic sleeper formed with an inverted T shaped slot, in its limbs, and provided with cheek pieces bent upwardly from the same and a tie of inverted T shaped form having its limbs freely occupying said slot, the horizontal limbs of said slot of said tie being below, whereby the tie is locked in the sleeper and prevented from upward displacement therefrom, substantially as described.

2. A metallic sleeper of inverted channel form having its limbs cut-away at the sides thereof, substantially as and for the purpose described.

3. The combination with a tie of inverted T shape, of a metallic sleeper having an inverted T shape slot which freely receives both limbs of said tie, and has its sides cut-away, substantially as described.

4. The combination of a metallic tie of inverted T-shape, having a recess in its vertical limb, to receive the base of a rail, with a sleeper having depending limbs with an inverted T shaped slot in each of the same, to receive said tie, and cheek pieces on said sleeper to embrace one side of the base of the rail, the tie having a cheek piece to embrace the other side of the base of the rail, substantially as described.

ENOCH LEWIS TAYLOR.

Witnesses:
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